Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Annual Assessment of the Status of	)	CS Docket No. 97-141
Competition in Markets for the	)	
Delivery of Video Programming	)	

FOURTH ANNUAL REPORT

Adopted: December 31, 1997 **Released: January 13, 1998**

By the Commission: Chairman Kennard and Commissioners Ness, Furtchgott-Roth and Tristani issuing separate statements.

Table of Contents

I. INTRODUCTION

1. This is the Commission's fourth annual report ("*1997 Report*")[1] to Congress submitted pursuant to Section 628(g) of the Communications Act of 1934, as amended ("Communications Act"). Section 628(g) requires the Commission to report annually to Congress on the status of competition in markets for the delivery of video programming.[2] Congress imposed this annual reporting requirement in the Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable Act")[3] as a means of obtaining information on the competitive status of markets for the delivery of video programming.[4]

A. Scope of this Report

2. In this *1997 Report*, we update the information in our previous reports and provide data and information that summarizes the status of competition in markets for the delivery of video programming. The information and analysis provided in this report is based on publicly available data, filings in various Commission rulemaking proceedings, and information submitted by commenters in

[1]The Commission's first three reports appear at: *Implementation of Section 19 of the 1992 Cable Act (Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming),* CS Dkt. No. 94-48, First Report ("*1994 Report*"), 9 FCC Rcd 7442 (1994); *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, CS Dkt. No. 95-61, Second Annual Report *("1995 Report")*, 11 FCC Rcd 2060 (1996); and *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, CS Dkt. No. 96-133, Third Annual Report *("1996 Report")*, 12 FCC Rcd 4358 (1997).

[2]Communications Act of 1934, as amended, § 628(g), 47 U.S.C. § 548(g) (1996) ("Communications Act").

[3]Pub. L. No. 102-385, 106 Stat. 1460 (1992).

[4]The 1992 Cable Act imposed a regulatory scheme on the cable industry designed to serve as a transitional mechanism until competition develops and consumers have adequate multichannel video programming alternatives. One of the purposes of Title VI of the Communications Act, Cable Communications, is to "promote competition in cable communications and minimize unnecessary regulation that would impose an undue economic burden on cable systems." 47 U.S.C. § 521(g).

response to a *Notice of Inquiry* ("*Notice*") in this docket.[5] To the extent that information included in previous reports is still relevant, we do not repeat that information in this report other than in an abbreviated fashion, and provide references to the discussions in prior reports.

3. Throughout this year's report, we provide information regarding the implementation of the Telecommunications Act of 1996 ("1996 Act")[6] and the effect that its provisions and those of the 1992 Cable Act have had on the status of competition in markets for delivery of video programming. The 1996 Act was intended to establish a "pro-competitive de-regulatory national policy framework" for the telecommunications industry.[7] Consistent with this philosophy, the 1996 Act extends the pro-competitive provisions of the 1992 Cable Act by adding several provisions that focus on removing barriers to competitive entry and on establishing market conditions that promote competition. Among the 1996 Act's provisions that affect competition in video markets are the provisions that: (a) prohibit restrictions on the use of certain over-the-air reception devices; (b) change the definition of a cable television system; (c) permit cable operators to offer discounted bulk rates in multiple dwelling units; (d) provide for competition in multichannel video programming distribution ("MVPD") "navigation" equipment markets; (e) allow the entry of exempt public utility companies into video markets; (f) eliminate entry barriers for entrepreneurs and small businesses; and (g) establish open video systems ("OVS").[8] Recent activity brought about by these provisions is discussed in this report.

4. In Section II we examine the cable television industry, existing MVPD and other program distribution technologies, and potential competitors to cable television. Among the MVPD systems or techniques discussed are direct broadcast satellite ("DBS") services and home satellite dishes ("HSDs"), wireless cable systems using frequencies in the multichannel multipoint distribution service ("MMDS") or local multipoint distribution service ("LMDS"), satellite master antenna television ("SMATV") systems and broadcast television service. We also consider several other existing and potential distributors of and distribution technologies for video programming including, the Internet, home video sales and rentals, and interactive video and data services ("IVDS"), local exchange telephone carriers ("LECs"), and electric and gas utilities.

5. In Section III of this report, we examine market structure and competition.[9] We evaluate horizontal concentration of cable television systems and vertical integration between cable television

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[5] *Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, CS Dkt. No. 97-141, Notice of Inquiry, 12 FCC Rcd 7829 (1997). Appendix A provides a list of commenters. At its regular Commission meeting on December 18, 1997, the Commission heard oral presentations regarding competition issues from Decker Anstrom, President and Chief Executive Officer, National Cable Television Association; Gene Kimmelman, Co-Director, Washington Office, Consumers Union; and Matthew Oristano, Chairman and Chief Executive Officer, People's Choice TV Co., and Chairman, Government Relations Committee, Wireless Cable Association International.

[6] Pub. L. 104-104, 110 Stat. 56 (1996).

[7] H.R. Rep. No. 104-458, 104th Cong. 2nd Sess. 1 (1996) ("Conference Report").

[8] *1996 Report*, 12 FCC Rcd at 4364-7 ¶¶ 5-10; *Notice*, 12 FCC Rcd at 7841-7844 ¶ 20.

[9] Appendix H of the *1994 Report* describes methods for assessing the status of competition in markets for the delivery of multichannel video programming. *1994 Report*, 9 FCC Rcd at 7623, App. H.

systems and programming services. We also discuss competitors serving multiple dwelling unit ("MDU") buildings. We further discuss program access and technological advances. In Section IV, we examine evidence of competitive responses by industry players that are beginning to face competition from other MVPDs. Section V is a discussion of issues relating to federal laws and regulations concerning the emergence of a freely competitive MVPD marketplace. Finally, in Section VI, we report on video description of video programming.[10]

B. Summary of Findings and Recommendations

6. A comprehensive review of this nature necessarily entails a detailed examination of an enormous amount of data. The exposition and discussion that follows is intended to serve, among other things, as a useful basis for determining what, if any, regulatory or congressional actions are needed to promote competition in the MVPD marketplace and thereby bring to consumers greater choice and improved service at the lowest possible price.

7. At the broadest level, we note that 87% of MVPD subscribers receive service from their local franchised cable operator. While this represents a slight decrease from last year, it shows the cable industry continues to occupy the dominant position in the MVPD marketplace. Further, cable operators on average increased their rates 8.5% for regulated programming and equipment over the 12-month period from July 1996 to July 1997.

8. The cable industry's large share of the MVPD audience is a cause for concern, in large part, only to the extent it reflects an inability of consumers to switch to some comparable source of video programming. Below we identify and discuss alternative sources of multichannel video programming, as well as regulatory and technological developments that have enhanced, or soon may enhance the competitive significance of alternative providers. In each case, however, we note various factors that place the alternative provider at a competitive disadvantage. For example, legal and technical constraints limit the ability of direct-to-home satellite providers to carry the signals of local broadcasters that are a staple of a cable operator's programming fare. Likewise, pending the deployment of digital and compression technology, a wireless cable operator is limited to a total of 33 channels, while the capacity of cable systems is such that almost 60% of cable subscribers are served by a cable operator that has a channel capacity of at least 54 channels.

9. As discussed below, the Commission recently has taken a series of steps to minimize and eliminate obstacles to competition. On December 18, 1997, we adopted a *Notice of Proposed Rulemaking* that seeks to ensure that MVPDs are not foreclosed from obtaining, and offering to their subscribers, cable programming that is distributed by programmers that are vertically integrated with cable operators. We have adopted and enforced rules preempting governmental and private restrictions that unreasonably interfere with a consumer's right to install the dishes and other equipment necessary to receive programming services from direct-to-home satellite, wireless cable, and other alternatives to franchised cable. In October 1997, we adopted new rules that make it easier for the owners and residents of a multiple dwelling unit to change providers, by providing certainty to alternative MVPDs regarding their rights to use the internal wiring installed in the building by the incumbent provider. The Commission also has increased the amount of spectrum available for wireless uses, and eliminated restrictions on the use

[10] 47 U.S.C. § 613(f).

of that spectrum, for the benefit of wireless providers. The Commission also has encouraged the development of digital television which may provide new competition.

10. Initiatives such as these are critical to the development of a competitive marketplace that, one day, will render superfluous cable rate regulation and other rules. In Section IV, below, we note the significant steps that cable operators have taken when subject to head-to-head competition, in the relatively few areas where such competition has developed. In such cases, cable operators have responded quickly with a mix of increased programming choices, lower rates, and improved customer service. The exact combination of these responses has varied among operators, as it should in a competitive market where consumer demand -- not monopolist strategies or government regulations -- dictates the supplier's response. We will continue to strive to make a competitive marketplace a reality for all consumers.

11. The following paragraphs contain a more detailed summary of the findings in this *1997 Report*:

OVERVIEW OF VIDEO PROGRAMMING DISTRIBUTION MARKET:

■ *Geographic and Product Markets:* For purposes of analysis, competition in the delivery of video programming involves local markets in which consumers can choose among particular multichannel or other video programming distribution services. The products that are sold in these markets consist of bundles of attributes -- antenna service, basic or optional tiers or packages of video programming channels, premium per-channel charge services, pay-per-view channels, and others. Providers of these services increasingly will participate in a broader telecommunications market that includes both video and nonvideo products as new communications services are added to their offerings. National, regional, and local markets are also involved in the video programming purchasing activities of these video providers.

■ *MVPD Market Overview:* A total of 73.6 million households subscribed to multichannel video programming services as of June 1997, up 2.8% over the 71.6 million households subscribing to MVPDs in September 1996 reported in the *1996 Report*. This subscriber growth accompanied a 2.9 percentage point increase in multichannel video programming's penetration of television households to 75.9% in June 1997. During this period, the number of cable subscribers continued to grow, reaching 64.2 million as of June 1997, up 1% over the 63.5 million cable subscribers in September 1996. Since the *1996 Report*, cable's share of total MVPD subscribers, however, continued to decrease from 89% of all multichannel video subscribers as of September 1996 to 87% of all multichannel video subscribers as of June 1997. Conversely, noncable subscribers continued to grow, constituting 13% of all multichannel video subscribers as of June 1997, up from 11% last year. The total number of noncable MVPD subscribers grew from 8.1 million as of September 1996 to 9.5 million as of June 1997, an increase of almost 20% since the *1996 Report*.

Local markets for the delivery of video programming generally remain highly concentrated and are still characterized by some barriers to both entry and expansion by competing distributors. DBS service is widely available and constitutes the most significant alternative to cable television. The digital technology employed by DBS provides high channel capacity and high picture quality. However, DBS service is different from cable service in a number of respects, including: (1) local broadcast signals are not available by satellite; (2) up front equipment and installation costs; and (3) the need to purchase additional equipment to receive service on additional television sets. Competitive overbuilding by franchised cable systems remains minimal, but is increasing and appears to improve service and/or pricing

where it exists. MVPDs using other distribution technologies have not posted subscribership increases comparable to DBS increases, but are in the process of testing digital technology that has the potential to improve significantly the competitiveness of their services.

MARKET PARTICIPANTS

■ *Cable Systems:* Incumbent franchised cable systems remain the primary distributors of multichannel video programming. A cable operator is typically franchised by a unit of local or state government to install and maintain cable facilities in public rights-of-way for the purpose of offering broadcast and satellite services throughout a community. Since the 1996 *Report,* the cable television industry has continued to grow in terms of subscribership (up to 64.2 million subscribers as of June 1997, a 1% increase from September 1996), channel capacity (average channel capacity increased 13.6% to 58.6 channels by June 1997), programming services distributed (17% increase in the distribution of national cable programming services), revenues (12.2% increase between September 1996 and June 1997), audience ratings (8.6% increase between September 1996 and June 1997 to an average 38 share for cable programming services), and expenditures on programming (an approximate 10.6% increase). Although cable subscribership continued to increase in absolute terms, its share of overall MVPD subscribership decreased from 89% to 87%, continuing the gradual decline in market share noted in the *1996 Report.*

Rates for cable services have increased over the last year. A Commission survey of cable industry prices indicates that the average monthly rate for programming services offered on basic and cable programming service ("CPS") tiers and equipment charges increased from $26.57 on July 1, 1996, to $28.83 on July 1, 1997, an increase of 8.5%. Cable operators participating in the survey state that the increase in cable rates is largely attributable to inflation, increased programming costs, channel additions, and system upgrades. Consumers Union and Consumers Federation of America filed a petition asking the Commission to freeze current rates for all regulated cable services while it investigates why rates are increasing so rapidly and considers changes to its cable rate regulation formula.[11] The petitioners argue that these rate increases are due, in part, to the greater consolidation of the cable industry and other developments that have increased concentration in the cable industry and undercut competition in the video marketplace.

■ *Direct-to-Home ("DTH") Satellite Service (DBS and HSD):* Video service is available from high power DBS satellites that transmit signals to small DBS dish antennas installed at subscribers' premises, and from medium and low power satellites requiring larger satellite dish antennas. It is estimated that there are in excess of 5.1 million DBS and medium power (Primestar) subscribers and between 3.8 and 4.0 million HSD users, although only about 2.1 million HSD subscribers actually purchase programming packages. DIRECTV and Primestar, which have the largest number of DBS subscribers, are again among the 10 largest providers of multichannel video programming service. Although the DBS share of the video market is continuing to expand, there are indications that its future growth may be slower than previously expected. The sale of large (HSD) dishes has declined as small (DBS) dish services have become more

[11] *Implementation of Sections of the Cable Act of 1992, Rate Regulation, Horizontal and Vertical Ownership Limits, Developments of Competition and Diversity of Video Programming Distribution and Carriage,* MM Dkt. Nos. 92-264, 92-265, 92-266, Petition to Update Cable Television Regulations and Freeze Existing Cable Television Rates, filed Sept. 23, 1997, by Consumers Union and Consumer Federation of America ("Consumers Union Petition"). Many of the issues discussed in the petition were reiterated by Gene Kimmelman representing Consumers Union at the December 18, 1997, Commission meeting.

readily available. DBS service is available nationwide (although some households cannot receive it due to physical obstacles), employs an advanced digital transmission technology, has some unique programming distribution rights, and is not subject to a variety of regulatory burdens imposed on franchised cable operators (e.g., franchise fees). DBS service includes a significant number of pay-per-view programming options and is particularly competitive for high revenue producing cable subscribers. DTH satellite service, while it has certain advantages over traditional cable service, is not, by itself, a direct substitute for cable service given the continued popularity of broadcast television programming and the absence of local broadcast signals from satellite distribution. DBS service more closely replicates cable service in areas where access to local broadcast signals is possible through over-the-air antenna reception. DTH subscribership varies from 23.6% in Montana to 2.3% in New Jersey, with a share of approximately 9.8% of national MVPD subscribership.

■ *Wireless Cable Systems:* As of June 1997, approximately 252 MMDS or wireless cable systems were in operation, mainly in urban areas. An MMDS operator transmits signals to microwave antennas installed at subscribers' residences. To function properly, wireless cable requires a clear line of sight from the transmitter to the point of reception and thus is more difficult to operate in areas where terrain, trees, or buildings block reception. Since September 1996, the wireless cable industry suffered an aggregate loss of 8.8% of its subscribers. In some markets, wireless cable providers intentionally stopped marketing their analog service in anticipation of the near term availability of digital transmission systems. Digital service, after a number of delays, has now been introduced in a number of markets and appears to produce dramatically better picture quality and increased numbers of channels. As of June 1997, wireless cable had a 1.5% share of national MVPD subscribership.

■ *SMATV Systems:* SMATV systems use some of the same technology as cable systems, but do not use public rights-of-way, and focus principally on serving subscribers living in MDUs. SMATV subscribership increased 10.7% since the last report. Many SMATV operators are upgrading facilities, implementing digital transmission and microwave headend technologies, and expanding service offerings to include DBS programming, Internet access, telephone service, and security services. SMATV systems had a 1.6% share of the national MVPD subscribership as of June 1997.

■ *Telephone Companies:* The 1996 Act significantly expanded the opportunities for local telephone companies to compete in video programming distribution markets. Telephone company (local exchange carrier or LEC) entry into this business, however, has proceeded sporadically and has been highly dependent on the business strategies of the individual companies involved. Virtually none of the video delivery by LECs at this time involves facilities that are technically integrated with existing telephone plant or that are used to distribute both video and telephone traffic. Some LECs (Ameritech, BellSouth, GTE, and SNET) have continued to expand franchised cable operations within their telephone service areas or to acquire in-region MMDS systems. Others (US West, Bell Atlantic, and SBC) have minimized or abandoned further activities in multichannel video programming within their regions. Tele-TV and Americast, two joint ventures organized by LECs to provide original video programming and packaging, have significantly scaled back their operations.

■ *Open Video Systems:* In the 1996 Act, Congress established a new framework for the delivery of video programming -- the open video system ("OVS"). Under these rules, a LEC or other entrant may provide in-region distribution of video programming to subscribers, although the OVS operator must provide non-discriminatory access to unaffiliated programmers on a portion of its channel capacity. The

Commission has certified Bell Atlantic to operate an OVS system in Dover Township, New Jersey. The Commission also has certified five other OVS systems in eight areas.

■ *Video Cassette and DVD Sales and Rentals:* Video cassettes provide feature films similar to those distributed by cable operators on premium channels and others involved in the distribution of video programming. The most recent available data (for 1996) show that 88% of U.S. television households have a video cassette recorder ("VCR"). The U.S. video cassette rental and sales market is estimated to receive $15.6 billion in annual revenues, an amount that significantly exceeds the combined total spending of $7.2 billion in 1996 for similar products distributed by cable television, satellite, and other MVPD pay television services. The introduction of Digital Versatile Discs ("DVD") and Disc Players, which became available to the public in 1997, could provide a significant alternative to VCRs and cassettes and to premium and pay-per-view channels with similar content distributed by MVPDs.

■ *Electric Utilities:* Section 103 of the 1996 Act removed regulatory impediments to the entry of "registered" public utility holding companies, including in particular providers of electric power, into telecommunications and video markets. Over the last year, a number of publicly- and investor-owned utilities have announced plans or have commenced ventures involving multichannel video programming distribution. Utilities, however, are not yet actual participants in the market for the distribution of video programming.

■ *Internet Video:* Video programming may be distributed over the Internet or other data channels for viewing on computer terminals. This is accomplished by using video compression technologies and through downloading of the video data for later playback or through video "streaming." Due to bandwidth and other limitations, this method of video distribution does not yet produce programming that is comparable in length, quality, or convenience to broadcast video. Before Internet distribution of video becomes competitive in the video distribution marketplace, significant improvement must be made in this form of delivery.

■ *Broadcast Television:* Broadcast television is available to the public both through direct reception and through MVPD distribution and continues to be the public's primary source of video programming, regardless of transmission medium. The four major television broadcast networks still account for a 59% share of prime time television viewing for all television households. The number of television broadcast stations continued to increase (to 1561 in 1997 from 1550 in 1996). Television broadcasting remains a significant alternative to other means of video programming distribution for viewers, programmers and advertisers. However, viewership of broadcast station programming continued to gradually decline as viewership of cable and satellite network programming increased. Approximately 23% of all television households receive television programming entirely from over-the-air television broadcast reception. In the years ahead, fundamental changes in the nature of broadcast television will be taking place. The Commission has adopted rules for implementation of digital television ("DTV") and broadcasters have continued testing DTV as they plan for the use of DTV spectrum. Under the Commission's rules for DTV, digital encoding and transmission technology will permit stations to broadcast: one or perhaps two High Definition Television ("HDTV") signals; multiple streams of Standard Definition Television ("SDTV") signals; or a combination of the two. The first DTV stations will begin broadcasting in the top ten markets by November 1998, with the digital transition currently scheduled to be completed by 2006.

LOCAL, REGIONAL, AND NATIONAL HORIZONTAL MARKET DEVELOPMENTS

■ *Multiple Dwelling Unit Buildings as a Separate Market*: Video distribution competition within and for multiple dwelling unit buildings ("MDUs") appears to be developing as a distinct market separate from neighboring areas. Competitors for this market face different economics, technical applications, and regulatory issues.

■ *Local Market Competition for Video Subscribers:* Local markets for the delivery of video programming generally remain highly concentrated and continue to be characterized by some barriers to entry and expansion by potential competitors to incumbent cable systems. Competitive overbuilding by franchised cable operators remains minimal but is increasing (particularly by LECs) and appears, to varying degrees, to improve service and/or pricing where it exists. It remains difficult to determine whether or when competition from closely substitutable multichannel video programming services will affect currently non-competitive markets. DBS service is available in almost all areas and constitutes the most significant alternative to cable television. Its major advantage is its ability to offer service which is significantly different from cable service with respect to signal quality and programming options. Its major disadvantages, however, include its inability to provide local broadcast programming and the expense of its equipment and installation. In addition, its current advantage in channel capacity may be transitory once cable systems deploy digital distribution technology. MVPDs using other distribution technologies have not posted subscribership increases comparable to DBS subscribership increases, but are in the process of testing digital technology that has the potential to improve significantly the competitiveness of their services. Consequently, it remains difficult to predict the extent to which competition from MVPDs using non-cable delivery technologies will constrain cable systems' ability to exercise market power in the future.

■ *Local Interservice Competition; Telephone Companies Offering Video and Cable Operators Offering Telephony:* The 1996 Act repealed a statutory prohibition against an entity holding attributable interests in a cable system and a LEC with overlapping service areas. At the time of the 1996 Act's passage, members of the local telephone industry indicated that they would begin to compete in video delivery markets, and cable television operators indicated that they would begin providing local telephone exchange service. The expectation was that there would be a technological convergence that would permit use of the same facilities for provision of the two types of service. This technological convergence has yet to take place. Almost all of the video service being provided by LECs is being provided using conventional cable television technology or wireless cable operations that stand alone from the provider's telephone facilities. The provision of telephone service by cable firms over integrated facilities remains primarily at an experimental stage. The one area where many cable operators appear poised to compete head-to-head with local telephone companies is in the provision of Internet access. Technology in this area appears to be rapidly advancing and service is being deployed on a commercial basis in a large number of cable systems.

■ *Regional Clustering of Cable Television Operations:* A trend toward regional clustering of cable television operations continued during the course of the last year. As a result, 139 cable systems serve in the aggregate over half of all cable subscribers. The consolidation of systems into regional clusters appears to have a number of technical and economic advantages for system operators. This trend also has marketing advantages for system operators and should accommodate their entry into broader telecommunications markets where other competitors are providing service throughout or across large

regional areas. Regulatory controls attach to cable systems on a political subdivision basis, however, resulting in the application of non-uniform regulations at the local level throughout a larger region.

■ *Cable and MVPD Concentration at the National Level:* Ownership patterns among cable multiple system operators ("MSOs") at the national level also have changed, in part because of the regional clustering phenomenon. Whether concentration at the national level is viewed as having decreased or increased is dependent on an analysis of certain transactions that have been announced but have not yet been consummated. In particular, TCI, the largest MSO, has announced a series of transactions whereby certain systems it currently owns will be owned or managed by other operators with a more significant regional presence in the markets where these systems are located. These transactions have been announced as system divestitures, although they will result in continuing financial or ownership relations between TCI and the entities acquiring management or control over the systems involved. Whether these transactions should ultimately be viewed as increasing the size of TCI depends in part on the specific details of the transactions involved which are not now before the Commission and that may not have been finalized. If the arrangements are such as to create attributable interests, the result could be a significant increase in TCI's attributable share of the national market and in the indices that have been used to measure concentration at the national level.

PROGRAMMING AND VERTICAL OWNERSHIP MARKET DEVELOPMENTS

■ The proportion of national programming services that are vertically integrated with cable operators declined slightly from last year's total of 46% to 40% this year. Eight of the 16 national programming services launched since the *1996 Report* have been vertically integrated with an MSO. In local and regional markets, system operators are increasingly distributing local non-broadcast news channels, some of which are programmed by affiliates of the operator and a significant number of which are programmed by non-affiliated local television stations. The integration of regional sports programming with system ownership has taken place through the merger of eight TCI-affiliated Fox/Liberty regional sports networks with seven Cablevision-affiliated SportsChannel regional sports services.

CASE STUDIES OF COMPETITIVE RESPONSES

■ *Competitive Response in Markets with Wireline Competition:* Although there have not been a large number of instances in the past year, several new wireline providers have entered incumbent cable operators' markets. A review of a limited number of markets where an incumbent cable operator faces competition from one or more MVPDs also using wired delivery indicates that the incumbent operator is responding by offering new services and new products, providing better customer service and lowering prices.

CHANGES IN TECHNOLOGY

■ *Technological Change*: Advances in and development of digital technology will permit all distributors of video programming to increase the delivered quantity of service. Digital technology increases the number of programming channels that may be communicated over a given amount of bandwidth or spectrum space. MVPDs and broadcasters continue to pursue improved digital compression ratios and deployment of digital technology.

REGULATORY ACTIVITIES AND ISSUES

■ *Over-the-air Reception Devices:* Video delivery services that use the radio spectrum to deliver service, such as broadcast, DBS, and MMDS services, typically require consumers to install and make use of external antennas and other reception equipment. Pursuant to Section 207 of the 1996 Act, the Commission has issued regulations to prohibit restrictions that impair a viewer's ability to receive video programming services through devices designed for over-the-air reception of television broadcast signals, MMDS, or DBS services. This action gives more control and choice to consumers to select alternative sources of video programming without regard to certain restrictions imposed by local governments or community associations. The Commission has preempted a number of such restrictions in individual cases. Petitions for reconsideration of the rules are pending, as is a further proceeding addressing the applicability of Section 207 to antenna installations on property in which the viewer does not have an ownership interest and exclusive use or control, such as rental apartments. Depending on the outcome of those proceedings, additional antenna placement rights may be necessary if competition for individual MDU subscribers is to take place on a broader basis.

■ *Inside Wiring:* The ability of video service providers to compete to provide service to MDUs or to serve the residents of MDUs often is dependent on who owns or controls the inside wiring in the buildings. In October 1997, the Commission adopted inside wiring rules designed to promote competition for and within MDUs. The rules provide certainty for alternative video programming providers and MDU owners regarding whether the existing inside wiring will be available for use when the incumbent's service is terminated. The rules adopted were limited in scope, applying only where the incumbent MVPD no longer has a legally enforceable right to remain on the premises. If the Commission had more explicit authority to address wiring transfer and compensation issues, competition for and within a building, could be enhanced.

■ *Pole Attachments:* Wireline video and telecommunications competition is heavily dependent on the ability of market participants to obtain access to utility poles, conduits, and rights of way at reasonable rates. The 1996 Act directed the Commission, within two years, to issue new pole attachment and conduit rate formulas. A proceeding is in progress to undertake the necessary review of these rules. The pole attachment rate regulation function is one that is shared between the Commission and state and local governments, with state and local governments having priority in those situations where they choose to regulate. The initial congressional decision to exempt cooperatives and government entities appears to have been based, at least in part, on the implicit assumption that these entities were functioning not just as businesses providing utility pole and conduit space but as public representatives performing a regulatory or quasi regulatory function. Commenters suggest that when cooperatives and government entities are themselves engaged in the provision of communications services a conflict of interest may result such that the rates charged to competitors may no longer be cost based and that competition may accordingly be distorted.

■ *Program Access:* The 1992 Cable Act contains provisions that are intended to foster the development of competition to traditional cable systems by regulating the access of competing MVPDs have to vertically integrated, satellite distributed cable programming services. As the Commission has consistently noted, exclusive arrangements can be used to deter entry and inhibit competition from other MVPDs in markets for the delivery of multichannel video programming. However, exclusive arrangements can also produce efficiency benefits for the parties involved, and may increase competition through product differentiation, which can produce increased choice for consumers in programming and

distribution markets. The Commission has commenced a rulemaking proceeding to seek comment on a number of possible mechanisms for improving the effectiveness of the existing rules including: (1) establishing specific time deadlines for resolving program access cases; (2) improving the discovery process (e.g., some cable competitors propose that vertically-integrated programmers be required to disclose what they actually charge cable operators;[12] (3) including monetary damages among the available enforcement tools to discourage program access violations; (4) possibly applying the program access rules to certain situations in which programming is moved from satellite delivery to terrestrial delivery; and (5) revising the manner in which the rules apply to program buying cooperatives. It is not clear to what extent, if any, the provisions of the 1992 Cable Act cover programming distributed by means other than satellite or by programmers unaffiliated with MSOs. This is an issue of concern for a number of MVPDs competing with incumbent cable operators.

■ *Cable Horizontal Ownership Regulation:* The 1992 Act directed the Commission to set limits on the number of cable subscribers that could be reached by an individual MSO. In October 1993, the Commission adopted rules providing that, with limited exceptions, no MSO could pass more than 30% of the households passed by cable nationwide. The statutory provision involved, however, was found to be unconstitutional by a United States District Court and the Commission stayed the enforcement of its rules pending further judicial review. The appeal of the statutory provision has been consolidated with an appeal of the rules adopted by the Commission and the Court has indicated that it would not proceed with resolution of the matter prior to the Commission acting on pending petitions for reconsideration of the rules. As a result, the Commission will be required to complete its review of the rules while the issue of the constitutionality of the underlying statute remain unresolved.

■ *Mandatory Carriage of Local Broadcast Station Signals:* Relations between local broadcast stations and MVPDs concerning carriage of broadcast programming are mediated in part by the mandatory broadcast signal carriage rules that were required by the 1992 Act and by related provisions in the 1996 Act regarding open video systems. In addition, the Commission was required to initiate a proceeding at the time it prescribed standards for advanced television, now referred to as digital television ("DTV"), to establish any changes in the signal carriage requirements of cable television systems necessary to ensure the carriage of broadcast signals of local commercial television stations that have been changed to conform with such modified standards. In the context of adopting digital television standards, the Commission sought comment on relevant must carry rules or policies that might be needed both during the transition to DTV and once DTV has replaced the current analog system. The Commission has indicated that it intends to seek further comment on this issue.

■ *Television Broadcast Station Tower Siting Regulation:* The Commission has adopted an aggressive schedule for implementation of broadcast DTV. Digital television may provide a means for broadcast television stations to become more competitive in the market for delivery of video programming by permitting multiplexed services. In order to provide digital television service, broadcasters will need to modify their facilities, and, in many cases, to construct new transmitters and new towers. Of particular concern to broadcasters is the effect of local and state regulation on their ability to upgrade existing towers or to construct new towers in a timely manner. The Commission has initiated a proceeding to seek comment on whether any action is necessary in this regard to permit a rapid roll-out of DTV.

[12]Testimony of Matthew Oristano, on behalf of WCAI, at the Dec. 18, 1997, Commission meeting.

■ *DBS Public Service Obligations:* Competitive relationships in markets for the distribution of video programming are dependent in part on how different regulatory requirements are applied to the various market participants. The 1992 Act directed the Commission to initiate a rulemaking to impose public interest or other requirements for providing video programming on DBS service providers and mandated that DBS providers reserve between 4% and 7% of their channel capacity exclusively for noncommercial programming of an educational or informational nature. Such a proceeding was initiated. However, the statutory requirement was found to be unconstitutional. That ruling has subsequently been reversed. The Commission has resumed its rulemaking and has sought updated comments relating to this requirement.

■ *Copyright:* On August 1, 1997, the Copyright Office released a report on licensing regimes for broadcast signals. The report contains a number of legislative suggestions, including harmonization of cable and satellite carrier licenses (except to the extent that technological differences or differences in the regulatory burdens justify different copyright treatment); adjustment of license fees to reflect fair market value; and limiting or eliminating special provisions relating to small cable systems. The Copyright Office also recommends that the compulsory license for satellite retransmission be extended and that extensive changes be made to modify the "unserved household restriction." Changes in compulsory copyright license rates, structure, and coverage will have consequences for the competitive relationships among MVPDs. At present there is no mechanism for systematic coordination of copyright and communications policies and regulations. Under the Copyright Act, satellite compulsory copyright license fees for retransmission of broadcast signals are to be set at "fair market value," considering the competitive distribution environment and the economic impact of the fees on copyright owners, satellite carriers, and the continued availability of retransmissions to the public. On October 27, 1997, the Librarian of Congress, whose responsibility it is to adjust the fee, issued an order setting a rate of 27 cents per subscriber for satellite retransmission of distant superstation and broadcast network signals, an increase of 21 cents over the prior rate of six cents per subscriber. Legislation has been introduced that would delay the new fee structure pending a study of whether it would be an impediment to competition. DBS operators' current lack of local broadcast programming impairs DBS services' competitiveness with cable service. A consideration of satellite services' carriage of local or broadcast network programming would include a balance of the possibility of private negotiation for program rights, the scope of any compulsory satellite license or other copyright limitations, the scope of any must-carry or other carriage obligations, and the extent of statutory parity between cable and DBS. In considering possible changes in copyright, existing differences between the copyright treatment of cable transmissions and of satellite retransmissions of broadcast signals should be removed where possible so that the compulsory licenses do not affect the competitive balance between the satellite carrier and cable industries.

■ *Navigation Devices:* Navigation devices are television set-top boxes and other equipment that consumers use to access video programming. Section 304 of the 1996 Act requires the Commission, in consultation with appropriate industry standard-setting organizations, to adopt rules to assure the commercial availability of navigation devices from manufacturers, retailers and other vendors not affiliated with any MVPDs. The rules, which will expire once the Commission determines that a competitive market for navigation devices has developed, may not jeopardize the security of video services or impede a video provider's ability to prevent theft of service. A proceeding is in progress to consider rules to implement this provision.

■ *Video Description:* Video description is an aural description of a program's key visual elements that is inserted during natural pauses in program dialogue for the benefit of viewers with visual disabilities.

It generally describes actions that are not otherwise reflected in the dialogue, such as the movement of a person in a scene. The 1996 Act required the Commission to report to Congress on appropriate methods and schedules for phasing video description into the marketplace and other technical and legal issues related to the widespread deployment of video description. On July 29, 1996, the Commission submitted to Congress its first report on video description pursuant to this requirement.[13] In this proceeding, we requested information regarding video description to permit us to provide Congress with additional findings. The most widespread video description technology uses the second audio programming ("SAP") channel, a subcarrier that allows each video programming distributor to transmit a second soundtrack. It appears that economic barriers, technical limitations, and unresolved legal issues continue to limit the availability of the service at this time. The costs of providing video description are still quite high, significantly higher than those associated with closed captioning, and video description must compete with Spanish language audio tracks for use of limited SAP channel capacity. Continued public funding could foster the development of video description services to the point where widespread implementation of video description could become feasible, and could ultimately create a commercial market for video description. The advances of digital technology may allow the development and expansion of video description to occur more quickly than occurred in the case of closed captioning.

II. COMPETITORS IN MARKETS FOR THE DELIVERY OF VIDEO PROGRAMMING

A. Cable Industry

12. This section addresses the performance of franchised cable system operators[14] in three areas: (1) general performance -- both the quantitative and qualitative measures of services provided, subscriber levels, and viewership; (2) financial performance -- revenue and cash flow status; and (3) capital acquisition and disposition -- the amount of funds raised and used to improve existing physical plant and acquire new systems. In addition, this section discusses other performance indicators, including

[13] *Closed Captioning and Video Description of Video Programming, Implementation of Section 305 of the Telecommunications Act of 1996, Video Programming Accessibility*, MM Dkt. No. 95-176, Report, 11 FCC Rcd 19214 (1996).

[14] A franchise is defined as an authorization supplied by a federal, state, or local government entity to own or construct a cable system in a specific area. Communications Act § 602(9), 602(10), 47 U.S.C. § 522(9), 522(10). A cable system operator is defined as "any person or group of persons (A) who provides cable service over a cable system, and directly or through one or more affiliates owns a significant interest in such cable system; or (B) who otherwise controls or is responsible for, through any arrangement, the management and operation of such a cable system." § 602(5), 47 C.F.R. § 76.5(cc).

system transactions, cable overbuilds,[15] stock prices, rates charged by cable operators, and new services such as digital video services, cable data access, and cable telephony.

1. General Performance

13. Since our last report, the cable industry has grown in several ways including subscribership, homes passed, penetration, premium subscriptions, viewership, and channel capacity.[16] In addition, during all of 1996 and the first half of 1997, the industry began to expand its service offerings to customers in certain areas to include digital video service, cable modems, and cable telephony.[17]

14. *Cable's Capacity to Serve Television Households.* The number of U.S. homes with at least one television set grew from 95.9 million at the end of 1995 to 97 million at the end of 1996, an increase of 1.1%, with no change as of the end of June 1997.[18] The number of homes capable of receiving cable programming on those television sets ("homes passed") increased from 92.7 million at the end of 1995 to 93.7 million at the end of 1996, and 94.2 million by the end of June 1997.[19] This represents about a 1.1% increase between the end of 1995 and the end of 1996.[20] The proportion of television homes passed by cable decreased slightly to 96.6% from January to December 1996, but grew to 97.1% between January and June 1997.[21] The number of homes subscribing to cable has been increasing since December 1995, rising to 65.5% of all television households by the end of 1996, and to 66.2% of television households by the end of June 1997.[22]

15. *Subscribership and Capacity Usage.* Cable subscribership grew from 62.1 million subscribers at the end of 1995 to 63.5 million subscribers at the end of 1996, an increase of 2.3%,[23] and to an estimated 64.2 million subscribers at the end of the first half of 1997, a six month increase of about

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[15] *1995 Report*, 11 FCC Rcd at 2075 ¶ 36. An "overbuild" occurs when two or more wireline cable television systems directly compete for subscribers in a local video programming delivery market.

[16] *See* App. B, Tbls. B-1 and B-2, Nielsen Media Research, Nielsen Television Index/Monitor Plus, 1997, and Paul Kagan Assocs., Inc., *Channel Capacity Projections By Technology*, Marketing New Media, Sept. 16, 1996, at 1.

[17] *See* paras. 47 and 51 *infra*.

[18] *See* App. B, Tbl. B-1. A.C. Nielsen reports data on television households as of the beginning of the broadcast television season in September every year.

[19] *Id.*

[20] *Id.*

[21] *Id.*

[22] *Id.*

[23] *Id.*

1%.[24] Cable penetration (the proportion of homes passed that actually subscribe) also grew, increasing from 67% at the end of 1995 to 67.8% at the end of 1996, and 68.2% penetration at the end of the first half of 1997.[25] The number of homes subscribing to premium cable services increased by 5.7% in 1996 to 31.5 million homes from 29.8 million homes at the end of 1995, and the number of premium services to which homes are subscribing (known as "premium units") increased 5.6%, with 54.5 million premium units subscribed to by the end of 1996, and an estimated 57.2 million units subscribed to by year's end 1997, another 5% increase.[26]

16. *System Statistics*. Average channel capacity for cable systems has continued to increase. In October 1996, cable systems with a capacity of 30 or more channels accounted for 77.1% of all cable systems, or 8,134 systems, and 83.9% of all cable systems, or 8,260 systems in October 1997.[27] The percentage of systems with channel capacities of 54 channels or more accounted for 16.4% of all cable systems in October 1996, or 1,724 systems, and 19% of all cable systems or 1,886 systems in October 1997.[28] The average cable system channel capacity grew from about 47 channels at the end of 1995 to approximately 53 channels at the end of 1996, an increase of 12.7%.[29]

17. In October 1996, the number of subscribers served by systems with capacities of 30 channels or more grew to 98.2% of subscribers.[30] In October 1997, the number of subscribers served by systems with capacities of 30 channels or more remained at 98.2% of subscribers[31] The number of subscribers served by systems with capacities of 54 or more channels increased 6.4% between the beginning of October 1996 and the beginning of October 1997, from 55.3% of subscribers at the beginning of October 1996 to 58.4% of subscribers at the beginning of October 1997, or by 2.15 million subscribers.[32]

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[24] *Id.*

[25] *Id.*

[26] *Id.*, *See* Tbl. B-2.

[27] *See* App. B, Tbl. B-3. Use of October to October data is consistent with our *1996 Report*, and is the method used by Warren Publishing, Inc., to report system statistics.

[28] *Id.*

[29] Paul Kagan Assocs., Inc., *Channel Capacity Projections By Technology*, Marketing New Media, Sept. 16, 1996, at 1. Paul Kagan Associates began reporting a "weighted" average channel capacity for 1996 and beyond in their Aug. 31, 1997 issue of Cable TV Programming. NCTA uses these figures for cable channel capacity. Since there is no corresponding "weighted" 1995 figure, we use the unweighted capacity here to show a 1995-1996 increase. The weighted average channel capacity for the year-end 1996 was 68 channels. *See* Paul Kagan Assocs., Inc., *Weighted Cable Analog Channel Capacity Model*, Cable TV Programming, Aug. 31, 1997, at 1.

[30] *See* App. B, Tbl. B-4.

[31] *Id.* The number of systems not reporting or not available for categorization increased almost 30% between October 1996 and October 1997.

[32] *Id.*

18. *Viewership.* Over the past decade, non-premium cable[33] viewership has grown significantly, while viewership of broadcast television stations has steadily declined. The 24-hour a day, 7-day a week audience of all non-premium cable programming increased from an average 11.5 share[34] of television viewing hours in the 1987-1988 broadcast year to an average 36.25 share of television viewing hours in the 1996-1997 season.[35] Over the same period, the 24-hour a day, 7-day a week audience of the broadcast television stations, whether delivered over the air or by an MVPD, declined from an average 87.7 share of television viewing hours in the 1987-1988 season to an average 66.5 share of television viewing hours in the 1996-1997 broadcast season.[36] The viewing shares of the 24-hour a day, 7-day a week audience of premium channels[37] has not changed over the last decade, with a average 6.92 share in 1987-1988 and 1996-1997.[38]

19. *Networks.* The number of basic cable[39] networks increased from 104 to 126, 21.2%, between 1995 and 1996.[40] In the same period, the number of premium and pay-per-view[41] networks

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[33]The Nielsen Television Index reports non-premium cable viewership as "Cable Origination" viewing shares, and premium cable viewership as "Pay" shares. According to Nielsen, Cable Origination includes the basic cable tier and the cable programming service ("CPS") tier, also known as extended basic, and pay-per-view (defined as payment on a per-program basis). Nielsen separately reports "Pay" viewing shares as only premium tier (defined as payment on a per-channel basis for networks, such as HBO, Showtime).

[34]A share is the percent of all households using television during the time period that are viewing the specified station(s) or network(s). The sum of reported audience shares exceeds 100% due to multiple set viewing.

[35]Nielsen Media Research, Nielsen Television Index/Monitor Plus, 1997. Shares reported here are from the end of September through the beginning of the following September. Viewing hours are Monday through Sunday, 24 hours each day. Effective 1991, TBS' classification changed from independent station (part of the combined broadcast networks category) to cable basic service.

[36]*Id.*

[37]Premium service includes satellite delivered cable programming channels available for an additional monthly per network fee.

[38]Nielsen Media Research, Nielsen Television Index/Monitor Plus, 1997.

[39]We refer to all cable programming networks offered as a part of program packages or tiers as "basic cable networks." The primary level of cable television service is commonly referred to as "basic service" and must be taken by all subscribers. The content of basic service varies widely among cable systems but, pursuant to the Communications Act, must include all local television signals and public, governmental and educational access channels, and at the discretion of the cable operator, may include satellite delivered cable programming channels carried on the system. One or more expanded tiers of service known as CPS tiers for purposes of rate regulation and often known as expanded basic, may also be offered to subscribers. These expanded tiers of service usually include additional satellite delivered cable programming channels and are available for additional monthly fees. § 623(b)(7), 47 U.S.C. § 543(b)(7) and § 623(l)(2), 47 U.S.C. § 543(l)(2).

[40]*See* App. B, Tbl. B-5. Some of the new networks in late 1996 and early 1997 include ESPNEWS, Fox News Channel, and the Discovery Channel Group including Animal Planet, Discovery Civilization, Discovery Kids, Discovery Science, and Discovery Travel & Living. NCTA, *Directory of Cable Networks*, Cable Television

(continued...)

decreased. The number of premium networks decreased by three channels, and the number of pay-per-view networks decreased by one channel.[42] This fluctuation is considered normal by industry representatives, and is not assumed to be directly attributable to any particular event.[43]

20. *Programming Payments.* License fees paid by cable system operators to basic cable network programmers increased by 16.3%, from approximately $2.683 billion in 1995 to $3.121 billion in 1996.[44] Analysts estimate that in 1997, fees will increase by an additional 13.5% to $3.54 billion.[45] A study of television programming costs submitted by the NCTA suggests that these increases are part of a trend toward increased programming costs in both the broadcast and cable television industries that reflects sharply increased payments to sports teams, leagues, athletes, film producers, distributors, talent, and syndicators of television programming.[46] Copyright fees paid by cable system operators for broadcast signal carriage under Section 111 of the Copyright Act[47] increased 6.5% from $165 million in 1995 to $176 million in 1996.[48] From January 1, 1997, to October 21, 1997, $77.798 million in copyright fees have been collected from cable system operators.[49]

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[40](...continued)
Developments, Spring 1996, at 28-100; Telephone interview with Gregory Klein, Director of Economic and Policy Analysis, NCTA, (Nov. 13, 1997) ("Klein Interview, Nov. 13").

[41]Most cable television systems also offer premium services on a per channel basis for an extra monthly fee, and pay-per-view services on a per program basis. § 623(b)(7), 47 U.S.C. § 543(b)(7) and § 62 (l)(2), 47 U.S.C. § 543(l)(2). Nielsen also reports pay-per-view in this figure.

[42]*See* App. B, Tbl. B-5.

[43]Klein Interview, Nov. 13.

[44]Paul Kagan Assocs., Inc., *Economics of Basic Network Programming (1993-2006)*, Cable TV Programming, Apr. 30, 1997, at 7. Some attribute the increase primarily to progammers' increasing programming rates as opposed to increases in subscribers or increases in the channels exhibiting additional programming. Price Colman, *War Looms Over Program Prices,* Broadcasting & Cable, Dec. 16, 1996, at 11; and NCTA Comments at 20-21.

[45]Paul Kagan Assocs., Inc., *Economics of Basic Network Programming (1993-2006)*, Cable TV Programming, Apr. 30, 1997, at 7.

[46]Submitted by NCTA: Kagan Media Appraisals, Inc., *TV Programming Costs: An Analysis of the Market Forces Driving Entertainment and Sporting Rights Fees*, Dec. 1997.

[47]Copyright Act, 17 U.S.C. § 111 *et seq.* Details of the major copyright issues affecting multichannel programming distribution are discussed at paras. 241-247 *infra.* Among the recommendations made by the U.S. Copyright Office in its *"A Review of the Copyright Licensing Regimes Covering Retransmission of Broadcast Signals,"* (Aug. 1, 1997), is a recommendation that Congress adopt a flat, per subscriber, per signal fee for cable similar to the fee structure already in place for satellite carriers.

[48] Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Oct. 21, 1997. The actual fees collected as of October 21, 1997, for 1995 are $165,139,301.58 and for 1996 are $176,039,869.01.

[49]*Id.*

2. *Financial Performance*

21. Data concerning cable industry revenue and cash flow indicats that the cable industry remained financially strong in 1996 and the first half of 1997.

22. *Cable Industry Revenue.* Financial analysts report annual cable industry revenue for 1995 was $24.898 billion, which grew 8.9% to $27.120 billion in 1996.[50] For 1996, revenue per subscriber grew 5.6% to reach $431.85 per subscriber per annum by year's end.[51] While total industry revenue data for the first part of 1997 are not available, analysts estimate 1997 year-end total revenue will be approximately $30 billion, an increase of 9.9% from the 1996 total year-end revenue.[52]

23. When total cable system revenue is categorized by source, the greatest revenue growth as a percentage of total revenue in 1996 was in the pay-per-view sector, which increased 20.9% from $535 million annual revenue in 1995 to $647 million annual revenue in 1996.[53] Industry analysts predict this will increase in 1997 to an annual revenue of $815 million.[54] Advertising revenues retained by MSOs increased 16% in 1996 from $1.4 billion in annual revenue in 1995 to $1.7 billion in 1996.[55] Industry analysts predict this will increase in 1997 to annual revenue of almost $2 billion.[56] Advertising revenues retained by progammers increased by 18.4%, from $4.9 billion in 1996 to an estimated 1997 year-end figure of $5.8 billion.[57] Home shopping and premium tier revenues grew the least in 1996. Revenue from

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[50] *See* App. B, Tbl. B-6. Annual revenue grew 9.3% in 1995 from $22.786 billion total annual revenue in 1994 to $24.898 billion total annual revenue in 1995.

[51] *Id.*

[52] *Id.*

[53] *See* App. B, Tbl. B-6. Despite the loss of one pay-per-view network, the revenue generated by pay-per-view networks has increased. Some believe that this reflects increased use of pay-per-view service since there has not generally been an increase in pay-per-view programming prices. Pay-per-view is priced according to the number of programs purchased, thus the number of networks is not necessarily linked to the amount of revenue generated by such networks. Klein Interview, Nov. 13.

[54] *See* App. B, Tbl. B-6. Paul Kagan Associates estimates year-end revenues for total revenue and for each revenue segment. Paul Kagan Assocs., Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, Cable TV Investor, May 20, 1997, at 9.

[55] MSOs retain advertising revenues from local advertising only. *See* App. B, Tbl. B-6.

[56] *See* App. B, Tbl. B-6. Paul Kagan Associates estimates year-end revenues for total revenue and for each revenue segment. Paul Kagan Assocs., Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, Cable TV Investor, May 20, 1997, at 9.

[57] NCTA, *Cable Advertising Revenue*, Cable Television Developments, Fall 1997, at 9.

home shopping services grew from $144 million in 1995 to $145 million in 1996, a 0.7% increase.[58] Annual revenue from pay tiers grew from $4.8 billion in 1995 to $4.9 billion in 1996, an increase of 4%.[59]

24. In addition, the Commission calculates its own estimate of annual industry-wide revenue.[60] The Commission estimates that the cable industry's annual revenue increased between the end of 1995 and the end of 1996 by approximately 6.5% to approximately $26.05 billion dollars.[61] This increase is similar to the increase the Commission calculated for last year when annual revenue increased by approximately 6% from $23.07 billion to $24.45 billion between December 1994 and December 1995.[62]

25. *Cable Industry Earnings Before Interest, Taxes, Depreciation, and Amortization.* Measurement of earnings before interest, taxes, depreciation, and amortization ("EBITDA"), commonly referred to as "cash flow" by the industry, is often used to value the financial position of cable firms. Financial analysts report that industry-wide cash flow increased by 9.1% between the end of 1995 and the end of 1996, from $11.161 billion to $12.177 billion.[63] For the year ending December 31, 1996, the cable industry generated approximately $193.90 in annual cash flow per subscriber, about $10 higher than the $183.27 per subscriber generated for the year ending December 31, 1995.[64] There are currently no data available on industry cash flow for the first half of 1997, and analysts have not yet made predictions for year-end cash flow. The ratio of cash flow to revenue ("cash flow margin") increased from 44.8% in 1995 to 44.9% in 1996.[65]

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[58] *See* App. B, Tbl. B-6.

[59] *Id.*

[60] The Commission calculates its own estimate of industry-wide annual revenue in order to supplement information obtained from industry analysts. To calculate the industry-wide estimates of revenue, we first calculate an average revenue per subscriber figure for each year by dividing the total revenue of the companies in the group by the total number of subscribers of these companies for that year. Second, we multiply this average revenue per subscriber figure by an estimate of the industry's average subscribership for the year. The same methodology was followed to calculate the industry-wide estimates of cash flow. The estimates in this *1997 Report* differ from those in the *1996 Report* because secondary sources were used in many cases to obtain data, and only the firms with subscribership of 500,000 or more were analyzed. Unless otherwise noted, 1995 data used are from the companies' public filings with the Securities and Exchange Commission, their press releases, or discussions with company personnel. Some of the data taken from these sources have been adjusted to take into account acquisitions which occurred during each year. These adjustments are described in the notes for each table. Due to lack of data, adjustments have not been made for all acquisitions. Data collected for 1996 are from numerous sources which make it more closely aligned with industry estimates.

[61] *See* App. B, Tbl. B-7B.

[62] *Id.* Tbl. B-7A.

[63] *Id.* Tbl. B-6.

[64] *Id.*

[65] *See* App. B, Tbl. B-6. Cash flow margin is a commonly used financial analysis tool for determining an MSO's operating efficiency, profitability, and liquidity.

26. The Commission generates its own estimate of industry-wide cash flow, and estimates that industry-wide EBITDA in 1996 was approximately $12.4 billion, a 9.3% increase over 1995.[66] This is up from last year's estimated increase of 5.8% from approximately $10 billion in 1994 to $10.6 billion in 1995.[67]

3. Capital Acquisition and Disposition

27. *Cable Industry Financing.* From January to December 1996, the cable industry secured more private debt financing, but less public debt financing, than between January and December 1995.[68] In the first half of 1997, issuance of public debt by the cable industry rose, though the industry acquired less private debt.[69] This change is likely due to the low interest rates available in the public market throughout 1997.

28. *Cable Industry Financing -- January to December 1996.* The cable industry has typically relied on combinations of private and public financing, with the exact distribution of these combinations varying greatly from year to year. In 1996, the cable industry acquired $2.6 billion of net new private debt financing (i.e., financing received by MSOs from banks, insurance companies, and other institutional investors). This represents a significant increase over 1995's negative net activity of $808 million in private debt financing.[70] In 1996, $2.94 billion of public debt was issued and $1.586 billion was redeemed, yielding $1.354 billion in net new public debt financing.[71] This represents 78% less public debt financing than in 1995.[72] The remaining industry financing was obtained through a mixture of private equity (i.e., equity received by MSOs from individuals, private corporations, venture capital firms, and investment banks) and public equity offerings (i.e., stock markets), which yielded a combined $2.9 billion in total equity activity, compared to the $5 billion in total public and private equity activity during 1995.[73]

29. *Cable Industry Financing -- Recent Developments through June 1997.* From January through June 1997, the cable television industry acquired less private debt than during the same period in 1996. Between January and June 1997 the industry acquired $735 million of private debt compared

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[66] *See* App. B, Tbl. B-7A.

[67] *See* fn. 60 *supra* for explanation of methodology and sources of information.

[68] *See* App. B, Tbl. B-8. Refinancing activity increased over the previous year's activity. Paul Kagan Assocs., Inc., *Cable TV Financial Snapshot--December*, Cable TV Finance, Jan. 31, 1997, at 10.

[69] *See* App. B, Tbl. B-8.

[70] *Id.* In 1995, more private debt was redeemed than issued causing net negative activity of $808 million.

[71] *See* App. B, Tbl. B-8. and Paul Kagan Assocs., Inc., *Cable TV Financial Snapshot--December*, Cable TV Finance, Jan. 31, 1997, at 10.

[72] *Id.* In 1996, there was considerably more refinancing by the industry. More than $20 billion was refinanced in 1996, while only $12 billion was refinanced the prior year.

[73] *Id.*

with $1.7 billion for the same period of 1996.[74] However, considerably more public debt was issued between January and June 1997 than during the same period in 1996. Approximately $7.5 billion of net new public debt was issued for the first half of 1997 while approximately $2.7 billion was issued during the same time period in 1996.[75] Again, this is likely due to attractive interest rates available in the public market throughout 1997. Public equity activity was $1.2 billion from January through June 1997 down from $3.5 billion of activity from January through June 1996.[76]

30. *Capital Expenditures.* In 1996, the cable industry invested approximately $5.6 billion in construction of plant and equipment. This includes maintenance, new builds, rebuilds, converters, upgrades, and inventory, and is a 3.3% increase over last year's $5.4 billion expenditures.[77]

31. Increased capital expenditures are expected to continue in 1997 and beyond. Many of the large cable MSOs have made commitments to capital improvements for their systems. For example, MediaOne is currently undertaking a multi-billion dollar capital expenditure program to upgrade or substantially rebuild all of its systems by the end of 2000 by deploying hybrid fiber-coaxial ("HFC")[78] networks in combination with digital compression technology.[79] In 1997, MediaOne spent approximately $650 million on these rebuilds, which, combined with expenditures of $829 million in 1995 and 1996, represents an investment of more than $300 per subscriber since 1994.[80] In 1996, MediaOne completed many of its proposed upgrades and in 1997 these upgrades continue to be made.[81] Cablevision Systems is in the process of upgrading its Long Island, New York, and select New Jersey systems to a 750 MHz HFC network in order to provide over 470,000 of its customers with better picture quality, reduction in

[74]Paul Kagan Assocs., Inc., *Cable TV Financial Snapshot--May*, Cable TV Finance, Aug. 31, 1997, at 8.

[75]*Id.*

[76]*Id.*

[77]Paul Kagan Assocs., Inc. *Cable TV Financial Databook*, 1997, at 118.

[78]HFC uses both fiber and coaxial cable, extending fiber optics from the cable system's headend to a fiber optic node in the neighborhood. A shared coax cable extends from that node to a group of 150 to 500 customers, with each customer sharing that cable. Fiber to the curb ("FTTC") provides a fiber interface within 1,000 feet of the premises. HFC eliminates most, if not all, the need for amplifiers because it uses only a short length of coaxial cable. Price Waterhouse, *EMC Technology Forecast 1998,* at 125.

[79]US West Comments at 14-15.

[80]*Id.* at 18-19; *Continental Cablevision, Inc. Social Contract Annual Progress Report on Capital Spending for System Upgrades and Rebuilds 1996*, Continental Cablevision, Inc., Mar. 31, 1997, at 1.

[81]*Id.* at 5-13. MediaOne completed many proposed rebuilds in 1996 including most of its Massachusetts rebuilds; rebuilds in the northern suburbs of New York City; Bow, New Hampshire; Oakland Park, Pompano Beach, Wilton Manors, Lazy Lake, and Broward County Florida; St. Paul, Minnesota; numerous locales in Illinois; and a few locales in California, Nevada, Washington, and Idaho. The status of 1997 rebuild activity will be reported in MediaOne's annual progress report to the FCC to be filed Mar. 1998.

power interruptions, and better overall quality control for the operator.[82] Cablevision has completed its upgrades in numerous locales in its Long Island, New York, system and upgrades in numerous locales in New Jersey.[83] Time Warner has agreed to upgrade all its cable systems to a capacity of at least 550 MHz with 50% of all subscribers having access to at least 750 MHz.[84] Time Warner has plans underway to invest $4 billion in capital costs in connection with the upgrade of its cable systems, and at the end of 1996 had invested $1.4 billion.[85] In 1997, Marcus Cable upgraded its Glendale, California, system to 750 MHz HFC, in order to provide its customers with increased channel capacity, enhanced picture and sound quality, and improved reliability.[86] These upgrades will enable future delivery of services such as video conferencing and Internet access.[87] Bresnan Communications upgraded 75% of its systems to 750 MHz, HFC architecture by the end of 1997, with upgrades of an additional 13% of its systems to 550 MHz.[88] Bresnan, for example, spent over $5.35 million to upgrade its system in Marquette, Michigan, to 750 MHz capacity.[89] One example of upgrades made by Comcast is its upgrade to a 750 MHz system in the Detroit metropolitan area, where Ameritech competes with Comcast.[90] Jones Intercable's most notable expenditure in 1997 has been its approximately $36 million construction of a new HFC network in Alexandria, Virginia, and Prince George's County, Maryland.[91]

4. Other Performance Indicators

32. *Cable System Transactions.* The number of mergers, acquisitions, and exchanges between MSOs has fluctuated greatly over the past few years. The number of systems sold doubled between 1994

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[82]Cablevision Systems Long Island Corporation, FCC Form 1235, filed Mar. 28, 1997, at 1-2.

[83]*Id.*; Cablevision of New Jersey, Inc., FCC Form 1235 filed Apr. 11, 1997, at Attachment I; Cablevision of Monmouth, FCC Form 1235 filed Apr. 11, 1997, at Attachment II; Cablevision of Hudson County, FCC Form 1235 filed Apr. 11, 1997, at Attachment II;

[84]*Social Contract for Time Warner,* Memorandum Opinion and Order, 11 FCC Rcd 2788, 2798 ¶ 25 (1995).

[85]*Id.* They completed $1.4 billion in compliance with their commitment to the Social Contract. See *Social Contract Progress Report 1996*, Time Warner Cable, at 5.

[86]*Marcus Cable Associates, L.P., Complaints Regarding Cable Programming Services Tier Rate Increases*, CUID No. CA0180, Order, DA 97-983, ¶ 10 (rel. May 9, 1997).

[87]*Id.*

[88]Telephone interview with Daniel White, Manager of Planning and Compliance, Bresnan Communications (Nov. 5, 1997) ("Daniel White Interview, Nov. 5").

[89]Bresnan Communications, FCC Form 1235, filed December 28, 1995, at 1-2.

[90]Ameritech Comments at 11.

[91]Telephone interviews with Dilpreet Jammu, Director of New Business Development, Jones Intercable (Oct. 27 and Dec. 3, 1997) ("Jammu Interviews, Oct. 27 and Dec. 3").

and 1995 from 64 to 128 transactions,[92] but between 1995 and 1996, there was 19.5% decrease in systems sold for a total of 103 transactions by year's end.[93] Of these 103 transactions, 8 were system swaps, thus making up 16 of the 103 transactions.[94] In 1995, approximately 20 of the 128 transactions were 10 different swaps.[95] From January 1997 through June 1997, 44[96] transactions have been recorded with 11 swaps making up 22 of those transactions.[97] Among systems changing hands, the total number of subscribers served and the average system size of these systems continue to vary greatly from year to year. Among 1996 transactions, the average system size decreased 11.4% from an average 85,450 subscribers per system in 1995 to an average 75,728 subscribers per system in 1996. Among transactions between January and June 1997, the average number of subscribers per system was 54,210.[98] The total number of subscribers affected by system transactions decreased 28.7% from approximately 11 million subscribers in 1995 to approximately 8 million subscribers in 1996.[99] Thus far in 1997, the total number of subscribers affected has been 2.4 million.[100] The total dollar value of transactions decreased 19.1% between 1995 and 1996, following a 43.2% increase between 1994 and 1995. The average dollar value per subscriber of 1997 transactions has been approximately $1,700 through June.[101]

33. *Overbuilding.* Head-to-head competition, where two or more wireline cable television systems compete for the same subscribers in the same local market, has increased over the past year.[102] As of July 1997, cable franchises have been awarded to competitors to incumbent cable operators in 81

[92]*See* App. B, Tbl. B-9. This includes all systems bought and sold.

[93]*Id.*

[94]*1996 Report*, 12 FCC Rcd at 4501-4507 App. F, Tbl. 5. *See also* App. E. Tbl. E-5. Transactions include both the buyer and the seller, thus one swap counts as two transactions.

[95]*1995 Report*, 11 FCC Rcd at 4501 App. G, Tbl. 5.

[96]This figure of 44 transactions differs from the figure of 46 transactions in App. E, Tbl. E-5 because of inconsistencies in the reporting procedures of the source that our analysis has uncovered.

[97]*See* App. E, Tbl. E-6. A transaction recorded on this table may not actually take place, although it has been announced to the public. Most recorded transactions do take place, although a few each year fall through.

[98]*Id.*

[99]*See* App. B, Tbl. B-9.

[100]*Id.*

[101]*Id.* More detailed information regarding transactions is provided in paras. 140-148 *infra.*

[102]Paul Kagan Assocs., Inc., *Cable TV Regulation*, July 31, 1997, at 1.